

Exhibit A

UNITED STATES DISTRICT COURT

DISTRICT OF CONNECTICUT

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MARLAINA A. NAPOLI-BOSSE, on :
behalf of herself and all :
others similarly situated, :
Plaintiff, : Civil Action No.:
v. : 3:18-cv-01720-MPS
GENERAL MOTORS LLC, :
Defendant. :

VIDEO-CONFERENCED EXPERT DEPOSITION OF MIKE VAN CAMP
TAKEN THROUGH ADVANCED REPORTING SOLUTIONS
VIA ZOOM

Taken on Wednesday, September 15, 2021

7:59 a.m. MST to 1:45 p.m. MST

Reported by: Abigail D.W. Johnson, RPR, CRR, CRC

Page 2	Page 4
<p>1 A P P E A R A N C E S</p> <p>2</p> <p>3 For the Plaintiff:</p> <p>4 Joshua Markovits</p> <p>5 LEMBERG LAW LLC</p> <p>6 43 Danbury Road</p> <p>7 Wilton, Connecticut 06897</p> <p>8 Jmarkovits@lemborglaw.com</p> <p>9 (203) 653-2250</p> <p>10</p> <p>11 For the Defendant:</p> <p>12 Joseph J. Orzano</p> <p>13 Seyfarth Shaw LLP</p> <p>14 Two Seaport Lane</p> <p>15 Suite 300</p> <p>16 Boston, Massachusetts 02210-2028</p> <p>17 Jorzano@seyfarth.com</p> <p>18 (617) 946-4800</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>-ooOoo-</p>	<p>1 Exhibit No. 14 GM000030480-GM000030481: E-mail113</p> <p>2 chain from Tom Burlingame</p> <p>3</p> <p>4 Exhibit No. 15 18-NA-297: 12/2018 Service Bulletin...119</p> <p>5</p> <p>6 Exhibit No. 16 GM000030768: E-mail from123</p> <p>7 administrative group</p> <p>8 Exhibit No. 17 19-NA-206: 9/2019 Technical Service ..124</p> <p>9 Bulletin</p> <p>10</p> <p>11 Exhibit No. 18 GM000031497-GM000031498: E-mail125</p> <p>12 chain from Tom Burlingame</p> <p>13 Exhibit No. 19 GM000031684-GM000031696: 12/4/2019 ...129</p> <p>14 Research Report</p> <p>15</p> <p>16 Exhibit No. 20 GM000034976-GM000034988: GM internal .136</p> <p>17 document</p> <p>18 Exhibit No. 21 GM000039268-GM000039274: E-mail162</p> <p>19 chain from Michael Van Camp</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>-oOo-</p>
Page 3	Page 5
<p>1 I N D E X</p> <p>2 EXAMINATIONS PAGE</p> <p>3 Examination By Mr. Markovits..... 5</p> <p>4</p> <p>5 E X H I B I T S</p> <p>6 EXHIBIT NO. DESCRIPTION PAGE</p> <p>7 Exhibit No. 1 Notice of Deposition..... 16</p> <p>8 Exhibit No. 2 GM000037715-000037780: "Shift to 17</p> <p>9 Park" Message when in park</p> <p>10</p> <p>11 Exhibit No. 3 GM00001206-GM00001210: E-mail chain .. 33</p> <p>12 from Andrew Shoemaker</p> <p>13 Exhibit No. 4 GM00001211: PRO_DET C1UG D2JCI 9C..... 41</p> <p>14 Exhibit No. 5 GM000019883-GM000019884: E-mail 54</p> <p>15 chain from Tom Burlingame</p> <p>16</p> <p>17 Exhibit No. 6 GM000020338-GM000020346: E-mail 64</p> <p>18 chain from Zlatko Bumbaroski</p> <p>19 Exhibit No. 7 GM000020079-GM000020081: E2SC Shift .. 72</p> <p>20 to Park Error Message</p> <p>21</p> <p>22 Exhibit No. 8 GM000020082-GM000020089: RedX 80</p> <p>23 Report: Vehicle Displays "Shift to</p> <p>24 Park" Message when already in Park</p> <p>25</p> <p>26</p> <p>27 Exhibit No. 9 PIT5616: Preliminary Information..... 92</p> <p>28</p> <p>29 Exhibit No. 10 GM000020722-GM000020725: E-mail chain 96</p> <p>30 from Michael Gritt</p> <p>31 Exhibit No. 11 GM000023187-GM000023194: E-mail100</p> <p>32 chain from Tom Burlingame</p> <p>33</p> <p>34 Exhibit No. 12 GM000022067-GM000022074: E-mail101</p> <p>35 chain from Michael Gritt</p> <p>36 Exhibit No. 13 GM000024051-GM000024053: E-mail110</p> <p>37 chain from Anne Franz</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p>	<p>1 September 15, 2021 7:59 a.m. MST</p> <p>2 P R O C E E D I N G S</p> <p>3 -oOo-</p> <p>4 Thereupon --</p> <p>5 MIKE VAN CAMP,</p> <p>6 was called as a witness, and having been first duly</p> <p>7 sworn to tell the truth, the whole truth, and nothing</p> <p>8 but the truth, testified as follows:</p> <p>9 EXAMINATION</p> <p>10 BY MR. MARKOVITS:</p> <p>11 Q. Good morning, Mr. Van Camp. My name is</p> <p>12 Josh Markovits. I represent the Plaintiff, Marlaina</p> <p>13 Napoli-Bosse, in a lawsuit titled "Napoli-Bosse versus</p> <p>14 General Motors" that is currently pending in the United</p> <p>15 States District Court in the District of Connecticut.</p> <p>16 It is a punitive class action.</p> <p>17 Before we get started, I wanted to go over</p> <p>18 some ground rules for today's deposition. My job here</p> <p>19 today is to ask questions. Your job is to answer</p> <p>20 questions, and the court reporter's job is to take down</p> <p>21 everything you and I and your counsel say.</p> <p>22 Therefore, when you're answering a</p> <p>23 question, please do so verbally so the court reporter</p> <p>24 can take it down. That means no "uh-huh," head shaking</p> <p>25 or other nonverbal gestures you might use in everyday</p>

<p style="text-align: right;">Page 22</p> <p>1 Q. Sure.</p> <p>2 Sitting here today, you know, in</p> <p>3 September 2021, why does GM believe that '17 and '18</p> <p>4 Acadias would display this "Shift to Park" message even</p> <p>5 though the transmission had already been placed in</p> <p>6 park?</p> <p>7 MR. ORZANO: Assumes facts, vague and</p> <p>8 ambiguous.</p> <p>9 THE WITNESS: So the vehicle, in its</p> <p>10 simplest terms, does not recognize that the park switch</p> <p>11 has closed when the shifter has been put into park.</p> <p>12 Q. (BY MR. MARKOVITS) Okay. Can you explain</p> <p>13 the process through, you know -- by which the car is</p> <p>14 supposed to recognize that the shifter has been placed</p> <p>15 in park? You mentioned a park switch. Can you kind of</p> <p>16 go through the chain of events that would lead the car</p> <p>17 to recognize that it's in park?</p> <p>18 A. The bi-control module, it's a computer,</p> <p>19 looks at the state of the park switch, whether it's</p> <p>20 opened or closed, and it compares that information also</p> <p>21 to the state of the transmission, whether the state of</p> <p>22 the transmission is in park or not park. And when the</p> <p>23 transmission is put into park and that state shows</p> <p>24 park, by the control module will also look at the state</p> <p>25 of the park switch. And the state of the park switch</p>	<p style="text-align: right;">Page 24</p> <p>1 Q. So glass forms on -- somewhere on the park</p> <p>2 switch; is that right?</p> <p>3 A. Correct.</p> <p>4 Q. And did this glass -- was it present when</p> <p>5 the park switch was manufactured?</p> <p>6 A. The silicon dioxides were not present when</p> <p>7 the switch was manufactured.</p> <p>8 Q. So this is something that happened over the</p> <p>9 course of time when the vehicle was driven?</p> <p>10 A. Correct.</p> <p>11 Q. Okay. And so the buildup of this glass or</p> <p>12 silicon dioxide would inhibit the park switch from</p> <p>13 closing; is that right?</p> <p>14 A. Correct.</p> <p>15 Q. Okay. And does GM know today why silicon</p> <p>16 dioxide manifests there or over time presented itself</p> <p>17 on the park switch?</p> <p>18 A. Yes.</p> <p>19 Q. And why is that?</p> <p>20 A. The park switch has organic silicon within</p> <p>21 the switch at some point. And through the actions of</p> <p>22 the switch opening and closing, that organic silicon is</p> <p>23 decomposed into its base elements and the organic</p> <p>24 silicon will immediately reform in the presence of heat</p> <p>25 into silicon dioxides and attach itself to the surfaces</p>
<p style="text-align: right;">Page 23</p> <p>1 will then determine its next steps.</p> <p>2 If the state of the park switch is closed,</p> <p>3 then the -- and the customer asks for the power to</p> <p>4 be -- the vehicle to be turned off, the vehicle -- the</p> <p>5 PCM will allow the vehicle to power down into the off</p> <p>6 state. If the shifter park switch still shows open,</p> <p>7 the vehicle will not allow the vehicle to power off and</p> <p>8 it will display the "Shift to Park" message.</p> <p>9 Q. So when the park switch remains opened,</p> <p>10 despite the fact that the transmission has been placed</p> <p>11 in park, the BCM does not recognize that the vehicle</p> <p>12 is, in fact, in park?</p> <p>13 A. Correct.</p> <p>14 Q. And sitting here today, does GM know why</p> <p>15 the park switch would remain open in instances in '17</p> <p>16 to '18 Acadias where, in fact, the transmission is</p> <p>17 already in park?</p> <p>18 A. Yes.</p> <p>19 Q. And what is that reason?</p> <p>20 A. The reason is build up of silicon dioxide</p> <p>21 on the switch contacts.</p> <p>22 Q. Can you break that down for me? What is</p> <p>23 silicon dioxide?</p> <p>24 A. Silicon dioxide is, in its simplest form,</p> <p>25 glass. It is an insulator, electrical contacts.</p>	<p style="text-align: right;">Page 25</p> <p>1 of the switch contacts.</p> <p>2 Q. It's safe to say that the vehicle was --</p> <p>3 this is not meant to happen; correct? This was an</p> <p>4 unintended effect?</p> <p>5 A. Correct.</p> <p>6 Q. And you mentioned that there's the presence</p> <p>7 of silicon that turned into silicon dioxide; is that</p> <p>8 right?</p> <p>9 A. That's correct.</p> <p>10 Q. And sitting here today, does GM know from</p> <p>11 what sources that silicon turned into silicon dioxide?</p> <p>12 A. We know of three sources, and there may be</p> <p>13 others.</p> <p>14 Q. Sure.</p> <p>15 The known three sources, what are those?</p> <p>16 A. Originated within the switch itself from</p> <p>17 the switch manufacturer, originated from rubber dampers</p> <p>18 that were lubricated with a silicon mold release. And</p> <p>19 originated from potentially silicon lubricant that was</p> <p>20 used on the shifter at the BTSI blocker pivot joint.</p> <p>21 Q. That last one is the third reason?</p> <p>22 A. Correct.</p> <p>23 Q. And can you state the name of that part</p> <p>24 again? I believe you mentioned earlier it was the one</p> <p>25 that requires that you be placed -- have your foot on</p>

Mike Van Camp
September 15, 2021

Pages 30..33

<p style="text-align: right;">Page 30</p> <p>1 page 4, so it mentioned the TAC Escalation Team 2 received 227 -- in response to 227 vehicles in the 3 field with the condition. 4 Do you know if some of those vehicles were 5 2017 and 2018 Acadias? 6 A. I don't have the TAC information in front 7 of me. For the SUFS -- the SUFS would have that 8 detail. 9 Q. So you don't know at all whether this 10 initial issue was discovered in the '17 or '18 Acadias 11 at this time? 12 A. I do not, based on that SUFS information in 13 front of me. 14 Q. When do you believe that GM first 15 discovered that 2017 Acadias were experiencing the 16 "Shift to Park" issue? 17 A. It would have been from an engineering 18 standpoint. It would have been the summer of '18. 19 Q. Putting aside for -- what do you mean by, 20 "an engineering standpoint"? 21 A. Engineering, the group that releases and 22 works technical problems on the components. 23 Q. So you know, broader than that, when did 24 GM, you know -- whether the engineering department or 25 otherwise -- discover that 2017 Acadias were</p>	<p style="text-align: right;">Page 32</p> <p>1 its authorized dealerships because that's the system in 2 which GM communicates with dealers and Tom is 3 designated for that. 4 MR. MARKOVITS: Mr. Van Camp is also 5 designated for all investigations, studies, analysis, 6 research, diagnosis, regarding the issue. So how GM 7 first discovered the issue is, obviously, relevant to 8 that and covered within that topic. Anyway, let's move 9 on. 10 MR. ORZANO: Josh, what are you asking 11 about in terms of when GM first learned of vehicles 12 experiencing the issue? He answered your question and 13 then you started drilling down into reports from 14 dealers. 15 MR. MARKOVITS: I'm trying to figure out 16 the process through which, you know, GM learned about 17 the issue. So it seems like one source was this 18 S-F-U [sic] report prepared by something called the TAC 19 Escalation Team. I'm trying to figure out what exactly 20 that is. So if Mr. Burlingame is able to speak about 21 that, then I'll ask him. 22 Q. (BY MR. MARKOVITS) All right. I am going 23 to send over another document. This exhibit will be 24 marked as Exhibit 3. This is a document produced by GM 25 Bates-labeled 1206 through 1210.</p>
<p style="text-align: right;">Page 31</p> <p>1 experiencing this "Shift to Park" issue? 2 A. Most likely, and this is conjecture at my 3 point, that it was about the same time frame as the 4 technical assistance group. 5 Q. Which is? 6 A. July -- July of '17. 7 Q. Okay. And there's a reference here to the 8 "TAC Escalation Team." 9 Do you know what that entails or what that 10 team does? 11 A. I do not. 12 Q. All right. So going back to Exhibit 1, 13 just the notice of deposition. 14 You were designated to speak on behalf of 15 Defendant, General Motors, with respect to Defendant's 16 Responses to Plaintiff's Requests for Production of 17 Documents; correct? 18 A. Correct. 19 Q. But you don't know some of this information 20 in this document. 21 Do you know who at GM would have 22 information about the TAC Escalation Team? 23 A. Tom Burlingame. 24 MR. ORZANO: Josh, just to interject. The 25 TAC would be part of Topic 4, communications by GM to</p>	<p style="text-align: right;">Page 33</p> <p>1 (Exhibit No. 3 marked.) 2 Q. (BY MR. MARKOVITS) Can you review this and 3 let me know when you're ready to discuss? If you could 4 first go to page 5 -- 5 A. I'm still -- I'm still reviewing. 6 Q. Sure. 7 A. Page 5? What's the Bates number? 8 Q. 1210. 9 A. Okay. I'm on 1210. 10 Q. So this is a May 15th, 2007 e-mail between 11 Andrew Shoemaker and Ryan Legato. 12 Do you know who Andrew Shoemaker is? 13 A. I do. 14 Q. It says here he is the ICEM QRD Lead. 15 Can you tell me what that means? 16 A. The ICEM is the acronym for Induction 17 Controls Exhaust Mounts group. And QRD is an acronym 18 for Quality Release Durability. 19 Q. And broadly speaking, what does he do or 20 what are his responsibilities? 21 A. He reviews and prepares warranty reports. 22 Q. Okay. So here he is saying -- he's 23 e-mailing Ryan Legato. And it looks like Ryan Legato 24 is the DRE-A/T Shift Controls. 25 So what does Mr. Legato do?</p>

Mike Van Camp
September 15, 2021

Pages 38..41

<p style="text-align: right;">Page 38</p> <p>1 writes: "For D2JCI and C1UG, the IPTV for the "shift 2 to park" message is much lower; only 18 cases." 3 So am I correct that this is the number of 4 complaints in the '17 Acadias and another vehicle 5 regarding "Shift to Park" messages at this time? 6 A. That is correct. 7 Q. And if you go down to page 3, Bates label 8 1208, there's a chart that's described as the amount of 9 months in service before the vehicle came in for this 10 issue. 11 A. I see it. 12 Q. And then it says, "13 months in service 13 seems to be the winner." 14 So are they saying here that the issue 15 typically manifests to their knowledge at this time 16 approximately 13 months into service of the vehicle? 17 A. That appears to be what they're stating. 18 Q. Sitting here today, is that GM -- is that 19 General Motors' understanding regarding when the issue 20 typically manifests? 21 A. Yes. It's -- it's certainly not a 22 short-term to long-term exposure. 23 Q. Okay. And when did GM begin selling the 24 2017 Acadias? 25 A. It would have been June or July of 2016.</p>	<p style="text-align: right;">Page 40</p> <p>1 go to the first page from 1206, Mr. Legato writes: "Do 2 you have verbatims for these?" 3 What's a "verbatim"? 4 A. Verbatim is the detailed explanation of the 5 defect from the customer and from the dealer technician 6 of how they solve the problem. 7 Q. Okay. Does GM maintains verbatims for each 8 warranty claim made? 9 A. They do -- 10 Q. Okay. 11 A. -- to the extent that information is 12 recorded by the dealer. 13 Q. Okay. 14 A. If the dealer does not record it, we don't 15 have access to that information. 16 Q. Okay. That makes sense and then Mr. Legato 17 also writes: "Do you have a ETA for the parts being 18 returned?" 19 What is he talking about here about the 20 parts being returned? 21 MR. ORZANO: Foundation, calls for 22 speculation. 23 THE WITNESS: I think at the time this was 24 written that they had requested warranty parts -- 25 warranty return parts for analysis.</p>
<p style="text-align: right;">Page 39</p> <p>1 Q. Okay. So based on that and this finding 2 that the issue takes a little over a year to manifest, 3 that GM had reason to believe that the number of 4 warranty complaints about this would continue to 5 increase over time; correct? 6 MR. ORZANO: Vague and ambiguous, calls for 7 a legal conclusion. 8 Q. (BY MR. MARKOVITS) You can answer. 9 A. At this time, when this was written, we had 10 no reason to believe other vehicles were affected by 11 the problem that is shown here on the previous vehicle. 12 Q. Well, this is an e-mail in May of '17. You 13 said you started selling the '17 Acadias in June or 14 July. So based on this determination that the issue 15 typically appears around 13 months, you know, they knew 16 that the issue generally would not have yet manifested 17 by this point in time; right? 18 A. Correct. 19 MR. ORZANO: Vague and ambiguous, assumes 20 facts. 21 Q. (BY MR. MARKOVITS) That was correct; 22 right? 23 A. Correct. 24 MR. ORZANO: The same objection. 25 Q. (BY MR. MARKOVITS) Okay. And then, if you</p>	<p style="text-align: right;">Page 41</p> <p>1 Q. (BY MR. MARKOVITS) And regardless of what 2 vehicle they came from, these are all the same shifter 3 parts; right? 4 A. The same design, not necessarily the same 5 part number. 6 Q. Okay. So aside from the part number, they 7 were the same designed shifter assembly; right? 8 A. Correct. 9 Q. I am going to send over another exhibit. 10 (Exhibit No. 4 marked.) 11 Q. (BY MR. MARKOVITS) So this is a document 12 produced by GM Bates-labeled 1211. My understanding is 13 this was an attachment to the e-mail exchange that we 14 were just reviewing. 15 Can you open up the document and let me 16 know when you're ready to review? 17 A. I have it open. 18 Q. Okay. So second to the -- so on the -- 19 there are a number of tabs. There is one called the, 20 "Detail_Report." 21 Can you open that one? 22 A. Yes. 23 Q. And so jumping back to Exhibit 3, Bates 24 label 1206. Mr. Shoemaker writes, "I've attached the 25 report for the D2JCI and C1UG shift to park messages.</p>

<p style="text-align: right;">Page 46</p> <p>1 Q. Okay.</p> <p>2 A. -- prior to this.</p> <p>3 Q. Are you aware of whether any other</p> <p>4 manufacturers had issues with the buildup of silicon</p> <p>5 dioxide?</p> <p>6 A. I am.</p> <p>7 Q. Which manufacturers have had issues with</p> <p>8 silicon dioxide in the past?</p> <p>9 A. I know specifically Volkswagen had a</p> <p>10 vehicle recall and the root cause was silicon dioxide</p> <p>11 on the park switch.</p> <p>12 Q. And do you know when -- what Volkswagen</p> <p>13 models and years that pertains to?</p> <p>14 A. I do not know specifically what model</p> <p>15 years -- years it pertains to.</p> <p>16 Q. Do you know approximately when this</p> <p>17 occurred?</p> <p>18 A. The recall came out in 2019, as I recall.</p> <p>19 Q. And how did you learn about this?</p> <p>20 A. General Motors has a process in which the</p> <p>21 technical leaders are to review other OEM's recalls,</p> <p>22 and it came through the normal process of review.</p> <p>23 Q. And aside from this Volkswagen recall, are</p> <p>24 you aware of any other manufacturers having issues with</p> <p>25 the, you know, unintended buildup of silicon dioxide?</p>	<p style="text-align: right;">Page 48</p> <p>1 I guess that they had seen some parts at that time.</p> <p>2 Q. Okay. And am I correct that when -- let me</p> <p>3 retract that.</p> <p>4 In what situations does GM send a failed</p> <p>5 part to its supplier? Does it do it as a matter of</p> <p>6 course or only in certain situations?</p> <p>7 A. We do it as a matter of course.</p> <p>8 Q. Okay. And aside from -- I take that back.</p> <p>9 Are you aware of what the supplier had</p> <p>10 determined regarding any possible root causes as of</p> <p>11 May 2017?</p> <p>12 A. I am.</p> <p>13 Q. And what did the supplier determine at that</p> <p>14 time?</p> <p>15 A. At that time, the supplier was unable to</p> <p>16 detect any faults within the parts.</p> <p>17 Q. And which supplier or suppliers are we</p> <p>18 referring to?</p> <p>19 A. The supplier in this particular case was --</p> <p>20 is SL America.</p> <p>21 Q. Okay. And what did SL America -- what</p> <p>22 function do they play in the manufacturing of the</p> <p>23 shifter assembly?</p> <p>24 A. They design and manufacture the shifter to</p> <p>25 our requirements. They own the design of the shifter.</p>
<p style="text-align: right;">Page 47</p> <p>1 A. I have not.</p> <p>2 Q. Okay. Thank you.</p> <p>3 So following this May 2017 exchange between</p> <p>4 Mr. Shoemaker, Mr. Legato and Mr. Conley, what did GM</p> <p>5 do to investigate the cause of this issue?</p> <p>6 A. At the time, we would have continued our</p> <p>7 normal warranty parts review process, return parts from</p> <p>8 the field, work with our supplier to conduct analysis</p> <p>9 on the parts to attempt a root cause and see what is</p> <p>10 causing the failures for the customers.</p> <p>11 Q. Okay. So in each instance that you'd get a</p> <p>12 warranty claim about this, are you collect -- is GM</p> <p>13 corporate collecting the failed part?</p> <p>14 A. We will collect the parts and the review</p> <p>15 process normally includes the suppliers. We will do an</p> <p>16 initial review with the parts and the supplier,</p> <p>17 depending on the disposition of the parts, the supplier</p> <p>18 may take the parts, most likely -- in most cases, they</p> <p>19 do take the parts. And they do the analysis on the</p> <p>20 parts for us.</p> <p>21 Q. Do you know if, as of May 2017, any of the</p> <p>22 suppliers involved in the manufacturing of these</p> <p>23 shifter assemblies have reviewed any failed parts?</p> <p>24 A. I don't know specifically, but based on the</p> <p>25 timeline and the language in the e-mail, I would make a</p>	<p style="text-align: right;">Page 49</p> <p>1 They design it to requirements, then they manufacture</p> <p>2 that component based on how they source the components</p> <p>3 within their normal business chain. And then they ship</p> <p>4 those parts to our GM assembly plants.</p> <p>5 Q. So is it SL America or General Motors who</p> <p>6 came up with the design for the shifter assembly?</p> <p>7 A. SL America.</p> <p>8 Q. Okay. How does that process work? Do you</p> <p>9 review their proposed design? Does GM have input in</p> <p>10 the design? How does it come to be?</p> <p>11 A. We review the design through a</p> <p>12 collaborative process and input is given. Direction is</p> <p>13 often given, as well as far as design criteria or</p> <p>14 design changes, but it is certainly most of the design</p> <p>15 is originated by the suppliers.</p> <p>16 Q. And do you know if there were any other</p> <p>17 suppliers involved besides from SL America regarding</p> <p>18 the creation of the shifter assembly?</p> <p>19 A. SL will -- a tier 1 supplier, which is the</p> <p>20 supplier we collaborate with other suppliers around the</p> <p>21 design of the components. So for example, the park</p> <p>22 switch, they would certainly collaborate with the</p> <p>23 supplier of the park switch, the wiring, et cetera.</p> <p>24 Q. And did a different supplier provide the</p> <p>25 park switch in the shifter assemblies?</p>

<p style="text-align: right;">Page 50</p> <p>1 A. Yes.</p> <p>2 Q. And what supplier is that?</p> <p>3 A. The supplier of the park switch is Omron.</p> <p>4 Q. Okay. And were there any other non-tier 1</p> <p>5 suppliers involved in the manufacture of any components</p> <p>6 within the shifter assembly?</p> <p>7 A. Yes.</p> <p>8 Q. And which suppliers were those?</p> <p>9 A. I'm not familiar with the exact name of the</p> <p>10 suppliers, but suppliers will often source out</p> <p>11 subassemblies to other suppliers and that supplier will</p> <p>12 make that subassembly and ship it into the tier 1</p> <p>13 supplier for assembly into the final assembly.</p> <p>14 Q. And so do you know if Omron or SL America</p> <p>15 was the supplier that inspected the failed shifter</p> <p>16 assemblies back in or around May 2017?</p> <p>17 A. SL would have inspected the shifters at</p> <p>18 that point.</p> <p>19 Q. And aside from saying they couldn't</p> <p>20 understand why it failed, did they give you any other</p> <p>21 information regarding, you know, their analysis or</p> <p>22 testing?</p> <p>23 A. Not that I am aware of.</p> <p>24 Q. So you don't know one way or the other?</p> <p>25 A. I do not.</p>	<p style="text-align: right;">Page 52</p> <p>1 around May '17?</p> <p>2 A. I do not know if any of those specific</p> <p>3 steps were taken or any dates that they may have</p> <p>4 occurred on.</p> <p>5 Q. Okay. So aside from the standard procedure</p> <p>6 of sending failed parts to the supplier and then, you</p> <p>7 know, reviewing them for obvious signs of failure, when</p> <p>8 did -- or did GM take any other steps to determine, you</p> <p>9 know, the root cause of this issue with failed shifters</p> <p>10 in the '17 to '18 Acadias or other vehicles containing</p> <p>11 the same shifter assembly?</p> <p>12 A. We certainly did. The -- the process of</p> <p>13 reviewing these parts, you know, when we begin to see</p> <p>14 some warranty creep up at the end of the summer of '18,</p> <p>15 we launched various additional activities to</p> <p>16 investigate this failure. We had a RedX team</p> <p>17 supporting our investigation. And there was a</p> <p>18 significant amount of activities looking at the entire</p> <p>19 system with respect to what potentially can cause the</p> <p>20 failures and how they might manifest themselves and how</p> <p>21 might we detect them.</p> <p>22 You know, the shift system is -- it may</p> <p>23 seem on the surface a rather simple system, but it's</p> <p>24 highly integrated into the vehicle. There are multiple</p> <p>25 points at which this "Shift to Park" message can be</p>
<p style="text-align: right;">Page 51</p> <p>1 Q. Okay. And when the supplier comes back to</p> <p>2 GM and says, you know, we can't determine why the</p> <p>3 shifter failed, what does GM do next, if anything?</p> <p>4 A. We continue to look for other root causes</p> <p>5 outside of the shifter that could have contributed to</p> <p>6 the failure.</p> <p>7 Q. Does GM not independently inspect the</p> <p>8 shifter itself to determine if that was the root cause</p> <p>9 notwithstanding the supplier's determination that it</p> <p>10 wasn't?</p> <p>11 A. We certainly do.</p> <p>12 Q. Did that happen here in or around May '17?</p> <p>13 A. We would have done a physical or a visual</p> <p>14 review of the components to ensure that from a visual,</p> <p>15 everything looks to be in place. There doesn't appear</p> <p>16 to be -- have been any abuse of the component, any</p> <p>17 customer spills that could affect the performance of</p> <p>18 the shifter as well. We will do some simple electrical</p> <p>19 testing on the parts that may or may not be able to</p> <p>20 determine or show that this particular part has failed.</p> <p>21 And we may very well take this component and put it</p> <p>22 into a vehicle as well to see if the issue will</p> <p>23 manifest itself again in a vehicle.</p> <p>24 Q. Do you know if any of those steps were</p> <p>25 taken with respect to failed shifters, you know, in or</p>	<p style="text-align: right;">Page 53</p> <p>1 originated from. And the process of looking at all</p> <p>2 those points was undertaken.</p> <p>3 So -- and I think one of the documents that</p> <p>4 was reviewed, there was one that we call a fishbone</p> <p>5 diagram. That fishbone diagram, identifies, you know,</p> <p>6 all the steps that we looked, all the areas of</p> <p>7 investigation. And it identifies which steps, you</p> <p>8 know, showed promise or at least correlation to the</p> <p>9 issues and which steps we looked at and said the</p> <p>10 problem does not lie within the system.</p> <p>11 And during the summer of '18, that was the</p> <p>12 majority of our work in which we were investigating</p> <p>13 this issue.</p> <p>14 Q. And were any steps taken between May '17</p> <p>15 and the summer of 2018 to do what you just described?</p> <p>16 A. Actually, I will step back and correct</p> <p>17 myself. That activity -- let me think here. I am</p> <p>18 trying to recall the exact timeline in which we did the</p> <p>19 work here. There most likely was. I don't recall the</p> <p>20 exact steps.</p> <p>21 Q. Okay. I am going to send over another</p> <p>22 exhibit. Bear with me one second.</p> <p>23 And Mr. Van Camp, just a reminder, if you</p> <p>24 need to take a break at any time, let me know. I'm</p> <p>25 fine. Just speak up and we can take a break.</p>

<p style="text-align: right;">Page 54</p> <p>1 A. Another 30 minutes maybe?</p> <p>2 Q. Okay. Sounds great.</p> <p>3 I just sent over a document from GM</p> <p>4 Bates-labeled 19883 to 19884.</p> <p>5 MR. MARKOVITS: And Ms. Court Reporter can</p> <p>6 you please mark that Exhibit 5.</p> <p>7 (Exhibit No. 5 marked.)</p> <p>8 THE WITNESS: I have it opened.</p> <p>9 Q. (BY MR. MARKOVITS) Okay. So here in April</p> <p>10 of 20- -- April 12th of 2018, someone is inquiring</p> <p>11 about "an issue when an Acadia gets a message on the</p> <p>12 cluster that say action required-shift to park when the</p> <p>13 vehicle is turned off, even though the vehicle is in</p> <p>14 park."</p> <p>15 And then a Michael Gritt, the program</p> <p>16 engineering manager says, "My memory tells me we did</p> <p>17 see this at least once before in the field, but I can't</p> <p>18 recall root cause/outcome."</p> <p>19 Do you know by April of 2018 what steps had</p> <p>20 been taken to determine the root cause of this issue?</p> <p>21 A. I'm reviewing the document. I don't recall</p> <p>22 specifically what we had done, but I could speculate</p> <p>23 what we would have done at this point.</p> <p>24 Q. Okay.</p> <p>25 A. We would have sent parts to our supplier.</p>	<p style="text-align: right;">Page 56</p> <p>1 What is "CPIT"?</p> <p>2 A. CPIT is an acronym for -- I do not recall</p> <p>3 it's exact name. Tom would be able to talk more</p> <p>4 specifically about that. I do know the function, it's</p> <p>5 a team that reviews warranty field reports on a regular</p> <p>6 basis and engages with engineering to support root</p> <p>7 cause analysis.</p> <p>8 Q. And so they are reviewing a number of</p> <p>9 different issues and vehicles on an ongoing basis; is</p> <p>10 that right?</p> <p>11 A. Yes.</p> <p>12 Q. At this point in time, do you know what</p> <p>13 departments are involved in investigating the root</p> <p>14 cause of this issue?</p> <p>15 A. Engineering, as well as our service</p> <p>16 organization.</p> <p>17 Q. Is there -- was there a formal</p> <p>18 investigation started by this point? Or is this just</p> <p>19 kind of the natural procedure in investigating, you</p> <p>20 know, failed parts on an individual basis?</p> <p>21 A. We had the RedX team supporting our</p> <p>22 investigation as well at this time, as I recall.</p> <p>23 Q. What is the RedX team?</p> <p>24 A. RedX is a methodology, not necessarily a</p> <p>25 team. It is a methodology which employs what they call</p>
<p style="text-align: right;">Page 55</p> <p>1 We would have done the visual examinations as well,</p> <p>2 certainly. We most likely would have continued to look</p> <p>3 at our other areas that could lead to this as well, the</p> <p>4 fishbone diagram as I alluded to previously.</p> <p>5 Q. And later that day, Mr. Burlingame</p> <p>6 responds: "Mike, we did see this early on with Acadia,</p> <p>7 and Zlatko felt it was cable adjustments."</p> <p>8 Do you have any -- do you know why the</p> <p>9 determination at this point was that the issue was</p> <p>10 caused by cable adjustments?</p> <p>11 A. As I recall, there were some early vehicles</p> <p>12 that were built that were misadjusted at the assembly</p> <p>13 plant and a misadjusted vehicle very well will manifest</p> <p>14 itself with the "Shift to Park" message. And we had</p> <p>15 experienced some of those early on in the Acadia</p> <p>16 launch.</p> <p>17 Q. If a vehicle, or if the Acadia rather, is</p> <p>18 assembled with a misadjusted cable, the issue will</p> <p>19 likely manifest pretty early on; correct?</p> <p>20 A. In most cases, yes.</p> <p>21 Q. And then Mr. Burlingame continues: "I was</p> <p>22 going to bring this up in CPIT today as I am again</p> <p>23 seeing a fair number of calls into TAC for Acadia with</p> <p>24 the "Shift to Park" message, no DTC's and in some cases</p> <p>25 the vehicle will not shut off."</p>	<p style="text-align: right;">Page 57</p> <p>1 dividing the dictionary to get to a root cause and they</p> <p>2 used statistical analysis, reviews of parts, sampling</p> <p>3 of parts, various methods within the RedX umbrella of</p> <p>4 problem-solving.</p> <p>5 And when I say "RedX team," essentially</p> <p>6 it's one person from the RedX group which will engage</p> <p>7 with our engineering team and will support us using the</p> <p>8 RedX methodology. So the engineers and I are</p> <p>9 essentially the RedX team with a RedX master that</p> <p>10 facilitates the problem-solving.</p> <p>11 Q. Who was the RedX master with respect to the</p> <p>12 RedX team investigating the "Shift to Park" problem?</p> <p>13 A. That would have been David Albrecht.</p> <p>14 Q. Okay. And do you know when he was assigned</p> <p>15 to this investigation?</p> <p>16 A. It would have been, if I recall, in '17,</p> <p>17 summer of '17.</p> <p>18 Q. Okay. Mr. Burlingame continues, "I also</p> <p>19 wanted to discuss whether or not to put some</p> <p>20 information out to Dealers on the steps to verify the</p> <p>21 root cause. Perhaps something like the following:</p> <p>22 Check shift cable adjustment, verify ground, G203 is</p> <p>23 clean and tight, check X212 terminal tension and be</p> <p>24 sure it is fully seated, check shifter Park position</p> <p>25 micro switch. And finally if all checks good, replace</p>

Mike Van Camp
September 15, 2021

Pages 70..73

<p style="text-align: right;">Page 70</p> <p>1 Q. Am I correct that by April 30th, 2018, the 2 RedX project regarding the "Shift to Park" message is 3 not focused on 2017 or 2018 Acadia? 4 A. That is correct. 5 Q. Okay. So then Mr. Bumbaroski continues: 6 "We still cannot root cause the issue." 7 Do you know at this point in time what 8 issues GM is having determining the root cause of the 9 issue? 10 A. I do. The primary issue in determining the 11 root cause was the inability to find a live case, a 12 case in which the engineers could actually examine a 13 vehicle that was displaying the "Shift to Park" 14 message. 15 Q. And so someone would complain to a dealer 16 that they're experiencing the issue, but then GM itself 17 couldn't manifest the issue? 18 A. That is correct. 19 Q. And so if the RedX project was just focused 20 on Malibus, my understanding is that they -- the RedX 21 project was not trying to duplicate the issue in 2017 22 Acadias yet? 23 A. That is correct. 24 Q. Okay. So then he continues: "Supplier SL 25 America tested warranty return parts and was not able</p>	<p style="text-align: right;">Page 72</p> <p>1 A. I do. 2 Q. Okay. He continues: "I attached E2SC RedX 3 project document and E2SC 5 phase." 4 So I am going to send over those 5 attachments momentarily. 6 A. Okay. 7 Q. So I just sent over document Bates labeled 8 200079 through 81. 9 A. I'm downloading it now. 10 MR. MARKOVITS: Ms. Court Reporter, can you 11 please mark that as Exhibit 7. 12 COURT REPORTER: Yes. 13 (Exhibit No. 7 marked.) 14 Q. (BY MR. MARKOVITS) Okay. 15 A. I have it. 16 Q. So this is a document attached to the 17 April 2018 e-mail we had just reviewed. 18 Do you know what this document is? 19 A. This appears to be portions of the RedX 20 report. 21 Q. Okay. And at the top it says, "E2SC." 22 That refers to Malibu; correct? 23 A. Yes. E2SC, yes. 24 Q. Okay. And the bottom it says: "Date Last 25 Modified: 8/16/17."</p>
<p style="text-align: right;">Page 71</p> <p>1 to duplicate the failure." 2 Do you know how many warranty return parts 3 this supplier had analyzed by this point in time? 4 A. I do not know. 5 Q. But they had not analyzed any '17 Acadias 6 yet or had they? 7 A. I do not know. 8 Q. Okay. So then he says: "It is true if the 9 Shift Cable is misadjusted can create this condition, 10 but many E2SC vehicles (and C1UC) under warranty are 11 with higher mileage and there was no misadjusted cable 12 issue" -- "including '17 Acadia." 13 Can you explain the interaction between 14 higher mileage and whether a misadjusted cable can 15 create this condition? 16 A. Yes. The -- when a cable is misadjusted, 17 if there is an issue, it typically -- not always -- 18 will typically show up early in the life of the 19 vehicle. 20 Q. And so here, they're basically saying we're 21 testing a vehicle that's having an issue with higher 22 mileage, so it's safe to assume that cable 23 misadjustment is not the cause? 24 A. They're speculating at that point, but yes. 25 Q. Do you agree with their speculation?</p>	<p style="text-align: right;">Page 73</p> <p>1 A. I see that. 2 Q. Am I correct that this document in its form 3 was created at the latest by August 16, 2017? 4 MR. ORZANO: Foundation, calls for 5 speculation. 6 THE WITNESS: The document in front of me 7 appears to have been modified on the 16th of August. 8 Q. (BY MR. MARKOVITS) And then if you look 9 towards the top, there's a box that says: "Root Cause 10 Analysis." 11 It says: "Issue exists between the BCM and 12 park switch on the shifter resulting in the BCM not 13 sensing the shifter is in park." 14 So does this mean that, basically, the 15 issue is that a computer is not recognizing that the 16 park switch -- well, actually, why don't you tell me 17 what this means. 18 A. The statement, issue exists between BCM and 19 the park switch on the shifter resulting in the park 20 switch or the BCM not sensing. So essentially, that 21 says that the BCM doesn't see any signal from the 22 shifter. 23 Q. Okay. 24 A. Essentially, the switch is open to the BCM. 25 Q. And below that it says: "SiOx has been</p>

<p style="text-align: right;">Page 82</p> <p>1 approximately 11 months prior to April 2018.</p> <p>2 So GM had sufficient information to</p> <p>3 determine that this issue was manifesting in the '17</p> <p>4 Acadias, too; correct?</p> <p>5 MR. ORZANO: Vague and ambiguous, calls for</p> <p>6 a legal conclusion.</p> <p>7 THE WITNESS: As I recall, that particular</p> <p>8 e-mail referenced 11 C1UG cases. It was a very small</p> <p>9 number at the time. So yes, we certainly had seen</p> <p>10 "Shift to Park" failures, but not at the level that we</p> <p>11 would consider systemic and similar to other vehicles</p> <p>12 that were having the issue.</p> <p>13 Q. (BY MR. MARKOVITS) But now, 11 months</p> <p>14 later, did the warranty complaints increase regarding</p> <p>15 the "Shift to Park" in the '17 Acadia?</p> <p>16 A. Based on the warranty data, yes.</p> <p>17 Q. Okay. So at the top right of this page, it</p> <p>18 notes that the failure is intermittent.</p> <p>19 How often do you see defects manifesting</p> <p>20 themselves intermittently? Is that common?</p> <p>21 A. That is --</p> <p>22 MR. ORZANO: Vague and ambiguous.</p> <p>23 THE WITNESS: It varies with the system.</p> <p>24 Mechanical systems tend to be very discreet failures.</p> <p>25 They don't fix themselves. Electrical systems tend to</p>	<p style="text-align: right;">Page 84</p> <p>1 A. Only based on the work done as part of the</p> <p>2 RedX, I can identify that they had eliminated -- part</p> <p>3 of the RedX process, they do what they call dividing</p> <p>4 the dictionary and that's what you are seeing here</p> <p>5 through the boxes that have the slash through them.</p> <p>6 They've identified that it lies within the shifter. So</p> <p>7 they've eliminated other components outside of this,</p> <p>8 the shifter. At this point, looked at shifter</p> <p>9 electrical.</p> <p>10 So they have actually eliminated the</p> <p>11 electrical portion of the shifter. And they're</p> <p>12 focusing on the mechanical side of it. They were</p> <p>13 identifying -- they've eliminated the stuck plunger or</p> <p>14 the shift knob interactions, the shifter and they've</p> <p>15 looked at the intermittent link closing switch.</p> <p>16 Q. So these are parts within the shifter</p> <p>17 assembly; correct?</p> <p>18 A. These are parts within the shifter</p> <p>19 assembly; correct. And they've looked at the</p> <p>20 dimensions within the shifter, and they've focused at</p> <p>21 this point on the interaction, the mechanical</p> <p>22 interaction of the shift to the switcher mechanism. So</p> <p>23 at this point, this RedX report was focusing on the</p> <p>24 mechanical interaction of the park shift to the rest of</p> <p>25 the shifter.</p>
<p style="text-align: right;">Page 83</p> <p>1 experience intermittent issues more so than not and are</p> <p>2 very difficult to diagnose and root cause.</p> <p>3 Q. So where you identify that the failure is</p> <p>4 intermittent, you know, what steps does GM take to kind</p> <p>5 of overcome that obstacle in determining the root</p> <p>6 cause?</p> <p>7 A. Utilizing problem-solving methodologies as</p> <p>8 noted here, the RedX. In addition to fishbone</p> <p>9 diagrams, we have a multitude of tools that are</p> <p>10 available to us to sort through complicated issues like</p> <p>11 this one.</p> <p>12 Q. Okay. Turn to the following page, page 3,</p> <p>13 Bates label 20084. It says, "Project Tree" at the top.</p> <p>14 A. Okay. This is -- I'm looking at</p> <p>15 page 20084?</p> <p>16 Q. Correct.</p> <p>17 A. Okay.</p> <p>18 Q. So in the bottom right it says: "Focus on</p> <p>19 the shifter assembly based on the following clues."</p> <p>20 So at this point has, you know -- what</p> <p>21 areas has the RedX team or GX eliminated as being the</p> <p>22 possible causes of the "Shift to Park" message?</p> <p>23 A. I have to review the entirety of the RedX</p> <p>24 report to accurately answer that question.</p> <p>25 Q. Okay, that's fine.</p>	<p style="text-align: right;">Page 85</p> <p>1 Q. Okay. And on page 5, it talks about -- its</p> <p>2 20086. It says testing by the supplier shows that the</p> <p>3 "park switch activation point matters."</p> <p>4 Can you explain that?</p> <p>5 A. So based on what I'm seeing here, testing</p> <p>6 was done at the supplier on BOB and WOW parts, And they</p> <p>7 found contrast. That's one of the RedX methods between</p> <p>8 known good parts and known bad parts of the activation</p> <p>9 point as measured by one of the components on the</p> <p>10 shifter. So as the park shifter is closed, they</p> <p>11 measure the point electrically to which the switch</p> <p>12 closes to some other feature and they identified</p> <p>13 contrast between good parts and bad parts.</p> <p>14 Q. So is this suggesting that the issue is</p> <p>15 specifically with the park switch itself within the</p> <p>16 shifter assembly?</p> <p>17 A. No. This is suggesting that some</p> <p>18 integration issue within the switch may be relating to</p> <p>19 it. Although, I will retract my previous note. Also</p> <p>20 it could be within the switch as well. Some mechanical</p> <p>21 problem within the switch.</p> <p>22 Q. Okay.</p> <p>23 A. So these dimensions -- these dimensions</p> <p>24 encompassed an entire integration of the switch as well</p> <p>25 as the internals of the switch.</p>

<p style="text-align: right;">Page 90</p> <p>1 A. Yes. The -- the part was very intermittent 2 and difficult to find. As noted in some of the other 3 documents, we did look at other customer vehicles and 4 when we went to the dealerships, we were not able to 5 reproduce the customer's complaint or the "Shift to 6 Park" message on our multiple visits to dealers in 7 local and southeast Michigan. 8 Q. So the more -- is it safe to say that the 9 more failed parts you have to inspect, the higher the 10 likelihood that you will be able to observe the 11 failure? 12 A. True. 13 Q. So wouldn't this then make sense to review 14 Acadia shifters, which are the exact same shifter, 15 which also has an increase in warranty claims at this 16 time? 17 A. That would be a logical conclusion, yes. 18 Q. All right. 19 A. My suspicion is that we were looking at 20 Acadia shifters as well. 21 Q. Okay. Do you know that, in fact, whether 22 or not General Motors was looking at Acadia shifters at 23 this time? 24 A. Based on our process, I would speculate 25 yes. Factually, I do not know.</p>	<p style="text-align: right;">Page 92</p> <p>1 where he said he wanted a break. 2 MR. MARKOVITS: Yeah, I could certainly use 3 a break. 4 MR. ORZANO: Yeah. Yeah, how long would 5 you like to take a break? 6 THE WITNESS: Twenty. 7 MR. MARKOVITS: That's fine. Okay. Let's 8 go off the record. 9 (Recess was taken.) 10 MR. MARKOVITS: I am going to send over 11 another exhibit. This is called PIT5616. This will be 12 Exhibit 9. 13 (Exhibit No. 9 marked.) 14 Q. (BY MR. MARKOVITS) Can you review and let 15 me know when you are ready to discuss? 16 A. Okay. I have it. 17 Q. All right. Are you familiar with this 18 document? 19 A. It's still downloading. 20 Q. Got it. 21 A. No, it appears I had an error. Can you 22 resend it, please? 23 Q. Sure. Let me know when you're ready to 24 discuss. 25 A. I'm ready.</p>
<p style="text-align: right;">Page 91</p> <p>1 Q. Okay. So then if you go up to the first 2 page, 2338, Michael Gritt writes back to David 3 Albrecht: "That E2SC PRTS has been opened for 289 days. 4 What is latest suspected root cause based on the last 5 two PRTS 1921012 entries (below)?? We have customers 6 coming in with claims daily now on C1UG/Acadia," and 7 then he continues. 8 "Wouldn't it make sense to include all the 9 opportunities of C1UG live cases that we are 10 experiencing?" 11 Here he's saying what I said; right? 12 Shouldn't we look at failed Acadia shifters to see -- 13 to increase the likelihood that we'll come across a 14 failed part? 15 A. So state the question again, please? 16 Q. Reading this e-mail from Michael Gritt on 17 May 23rd, at 3:01, is your understanding that at this 18 point in time, they are not -- the RedX team is not 19 inspecting failed Acadia shifters? 20 A. Based on what I'm seeing here, I don't 21 recall specifically, but it looks like they were not 22 including the C1UG Acadia. 23 Q. Okay. 24 MR. ORZANO: Josh, we've been going for a 25 while now. Mike, how are you doing? We're well past</p>	<p style="text-align: right;">Page 93</p> <p>1 Q. I think we discussed earlier that by 2 May 2018, the focus of the investigation as to the root 3 cause of the "Shift to Park" issue was the shifter 4 assembly; correct? 5 A. Correct, yes. 6 Q. Okay. Now, this is -- my understanding is 7 that this is the first bulletin that GM sent to dealers 8 regarding the "Shift to Park" issue; is that correct? 9 A. Yes. This is the first bulletin to 10 dealers, yes. 11 Q. And if you look halfway down it says -- 12 first it says the condition is that the "Vehicle 13 display 'Shift to Park' message when in Park." The 14 cause is "Unknown at this time." And then they list a 15 number of steps for the correction. 16 So the first -- it's kind of broken down as 17 far as whether you can duplicate the concern or not. 18 They say if you can duplicate the concern, "Observe the 19 shift boot for bunching at the front of the boot 20 causing the shifter to not fully engage in Park 21 position." 22 Can you explain what that means? 23 A. Yes. The shifter travels through 24 essentially an oval, a gate, we call it. And in some 25 situations, the shift boot can get trapped between the</p>

<p style="text-align: right;">Page 94</p> <p>1 tube and the front of that oval opening on the shifter. 2 And it can keep the shifter from going fully into park. 3 If that occurs, then, you know, your -- the 4 transmission will get into park, but the shifter won't 5 make it fully into park and then the park switch may 6 not close. We did see some instances of that on some 7 vehicles. So that's why we were asking for them to 8 review that to ensure that that wasn't happening. 9 Q. Was it a common observation or like a 10 one-off observation? 11 A. It was not systemic in that we saw 100, but 12 the occurrence was enough for us to say we should look 13 at it just to ensure that it wasn't the problem. It 14 was low. 15 Q. Okay. And then No. 2, it says: "Observe 16 the Park switch voltage which shifted into and out of 17 Park. Watch for Open and Closed condition. If it does 18 not change when moved to Park, verify again that the 19 boot is not in the way, and if not, replace the 20 shifter." 21 So are they -- what are they recommending 22 here that they check prior to replacing the shifter? 23 A. They are asking the technician to look at 24 the signal through the park switch to see if it's 25 functioning properly, essentially. With a digital</p>	<p style="text-align: right;">Page 96</p> <p>1 Q. Okay. 2 A. Although, let's see. It made some changes. 3 I'd have to look to understand the date of when that 4 was implemented, but the part number wasn't changed. 5 That means that the design is the same. 6 Q. Okay. It's substantively the same? 7 A. Yes. 8 Q. Okay. I'm going to send over another 9 exhibit. So this is the document produced by General 10 Motors Bates-labeled 20722 through 20725. 11 MR. MARKOVITS: Can we mark this 12 Exhibit 10. 13 (Exhibit No. 10 marked.) 14 Q. (BY MR. MARKOVITS) And let me know when 15 you're ready to discuss. 16 A. Okay. I have the e-mail opened. 17 Q. Okay. So can you go to the first page? 18 This would be 20722. 19 A. Yes, I have it open. 20 Q. So this is an e-mail where someone is 21 saying that: "Below is an e-mail from one of our 22 Dealers to a District Manager" -- regarding the "Shift 23 to Park" issue. 24 "I have had three calls this week from 25 other DMA's asking what to do about this concern.</p>
<p style="text-align: right;">Page 95</p> <p>1 voltmeter or a digital multimeter or some other 2 measuring device where they can actually look at the 3 voltage that is going through the shifter park switch. 4 Q. So they're saying if the voltage doesn't 5 change when you "Shift to Park", then -- so long as the 6 boot is not in the way, you should replace the shifter? 7 A. That's what it's saying, yes. 8 Q. And am I correct that by this point in 9 time, May 29, 2018, GM had not come up with a new 10 shifter for the '17/'18 Acadia? 11 A. When you say, "New," what specifically are 12 you asking? 13 Q. Okay. Is this bulletin directing dealers 14 to replace the shifter assembly part with an identical 15 part? Or has there been any sort of modifications to 16 the part by this point in time? 17 A. In this case, the service parts are the 18 same as the production parts. There is no difference. 19 Q. Okay. And so you know, to the extent that 20 the shifter -- the original shifter would result in the 21 "Shift to Park" message, there's a -- just as much of a 22 likelihood that the replacement part would result in 23 the "Shift to Park" message? 24 A. Yes. The probability would be the same on 25 each individual vehicle, yes.</p>	<p style="text-align: right;">Page 97</p> <p>1 Dealers are putting customers in loaner vehicles and 2 because we have no solution to the issue, the customers 3 are refusing to take their cars back until they are 4 fixed." 5 Then he goes on to say: "This is not a 6 good situation." Jumping ahead: "At this point it 7 appears no one can duplicate the concern. While we 8 can't just throw parts at it, we do need to put more 9 pressure on to find the root cause. I just don't 10 understand why we cannot find a 'live' case with so 11 many customers complaining about it." 12 Do you recall receiving pressure from other 13 departments to determine a root cause for this issue? 14 A. Yeah. I certainly recall this e-mail and 15 interactions with Michael Gritt. Tom and Michael were 16 both on the receiving end of the warranty and, you 17 know, they were contacting me and our team around our 18 activities and resolution of the root cause and what it 19 would take to get us there, the root cause, so we can 20 get good solutions into the hands of the customers. 21 Q. And what would you respond with at this 22 time? 23 A. At this -- 24 MR. ORZANO: Vague and ambiguous. 25 Q. (BY MR. MARKOVITS) What would you respond</p>

<p style="text-align: right;">Page 102</p> <p>1 correct?</p> <p>2 A. Yes.</p> <p>3 Q. And then he notes: "(Wouldn't silicon</p> <p>4 based grease not be an appropriate application relative</p> <p>5 to it degrading the contacts??)"</p> <p>6 What does he mean here?</p> <p>7 A. I'm not sure exactly.</p> <p>8 MR. ORZANO: Calls for speculation,</p> <p>9 foundation.</p> <p>10 THE WITNESS: So your question is --</p> <p>11 Q. (BY MR. MARKOVITS) My question is -- I'm</p> <p>12 referring specifically to the phrase, "(Wouldn't</p> <p>13 silicon based grease not be an appropriate application</p> <p>14 relative to it degrading the contacts??)"</p> <p>15 Is silicon-based grease known for having</p> <p>16 degrading contacts?</p> <p>17 A. So you're asking specifically is silicon</p> <p>18 based grease an acceptable lubricant in certain</p> <p>19 applications?</p> <p>20 Q. Well, I'm asking more specifically is it</p> <p>21 known to degrade over time? Or known to degrade</p> <p>22 contacts over time?</p> <p>23 A. It can in certain circumstances. So in</p> <p>24 the, you know, electrical contacts, when exposed to</p> <p>25 silicon grease if the conditions are right can lead to</p>	<p style="text-align: right;">Page 104</p> <p>1 conditions and switch contacts were a good environment</p> <p>2 for silicon dioxides to form if organic silicon was</p> <p>3 present.</p> <p>4 Q. And what made it a good environment?</p> <p>5 A. Our particular electrical signals in our</p> <p>6 vehicles and the material of the switch contact</p> <p>7 surfaces itself.</p> <p>8 Q. What were the materials that made it a good</p> <p>9 environment?</p> <p>10 A. So the contacts themselves were gold over</p> <p>11 silver over tin. Our research indicated that those</p> <p>12 particular combination of materials led themselves to</p> <p>13 the creation of the silicon dioxides as well, minor</p> <p>14 effect, but it was there, as well as the amount of</p> <p>15 energy was probably the higher contributor.</p> <p>16 Q. Can you explain that, the amount of energy</p> <p>17 being the higher contributor?</p> <p>18 A. Yes. The energy to create this silicon</p> <p>19 dioxide is a fairly narrow band. If the energy is too</p> <p>20 low, you can't disassociate the organic silicon. If</p> <p>21 the energy is too high, you certainly will disassociate</p> <p>22 the organic silicon and create silicon dioxides, but</p> <p>23 the energy will be high enough to burn through whatever</p> <p>24 debris and contaminants are created on that contact</p> <p>25 surface. So you have to have energies in this</p>
<p style="text-align: right;">Page 103</p> <p>1 contact degradation. Those conditions are very narrow.</p> <p>2 You certainly can use silicon-based lubricants in</p> <p>3 applications with switching contacts depending on the</p> <p>4 application. So to make a broad-based statement that</p> <p>5 it's not acceptable is not necessarily true. It's very</p> <p>6 much application dependent.</p> <p>7 Q. All right. Continue.</p> <p>8 A. You certainly can have silicon-based</p> <p>9 lubricants in electrical contacts depending on the</p> <p>10 application and the conditions of the switches.</p> <p>11 Q. I believe you mentioned earlier there were</p> <p>12 some situations where it would have a degrading contact</p> <p>13 based on the environment.</p> <p>14 What are those conditions or what</p> <p>15 environment leads to have those degrading</p> <p>16 characteristics?</p> <p>17 A. It comes down to the contact type and the</p> <p>18 energy that is going through the contacts as well.</p> <p>19 Q. So am I correct that ultimately it was</p> <p>20 determined that in this case it had that degrading</p> <p>21 effect on the switch contact?</p> <p>22 A. Yes.</p> <p>23 Q. With respect to the 2017, '18 shifters?</p> <p>24 A. So ultimately the root cause analysis</p> <p>25 determined that our conditions -- or electrical</p>	<p style="text-align: right;">Page 105</p> <p>1 called -- what I would call the "Goldilocks" zone,</p> <p>2 which typically starts at around 1.6 watts and</p> <p>3 depending on the application, can go higher than that.</p> <p>4 But our particular application was in the Goldilocks</p> <p>5 zone. So we were creating the silicon dioxides, but it</p> <p>6 wasn't so high that the energy was burning or cleaning</p> <p>7 the contacts as well.</p> <p>8 Q. Was GM aware, prior to its investigation</p> <p>9 regarding this issue, that under certain environments</p> <p>10 the use of silicon lubricant could have these degrading</p> <p>11 effects?</p> <p>12 A. I wasn't specifically aware, but there may</p> <p>13 have been people within General Motors that were aware</p> <p>14 of that.</p> <p>15 Q. Yeah, yeah. I was asking more broadly,</p> <p>16 actually, yeah.</p> <p>17 A. There certainly was people within General</p> <p>18 Motors that were aware of that phenomenon.</p> <p>19 Q. Okay. I think you're involved in this</p> <p>20 e-mail. So -- hold on one second. So if you go up to</p> <p>21 the fourth page, 22070, you note: "So far, no solid</p> <p>22 leads, but the warranty data across programs continues</p> <p>23 to support the problem lies within the shifter and not</p> <p>24 external."</p> <p>25 And then Michael Gritt responds that:</p>

<p style="text-align: right;">Page 106</p> <p>1 "What appears to be missing from your list of suspect 2 areas below is the grease used at the switch location. 3 We discussed that CPIT prior to the shutdown of running 4 WOW to BOB comparison of the observed SiOx buildup on 5 the switch contacts. Please answer the question on 6 this and what has already been done to re-verify if 7 there could be a compatibility issue with the type 8 and/or amount of grease being used as this would make a 9 lot of sense as to why the issue occurs mainly at 10 higher mileage." 11 So a couple of things I wanted to ask. 12 First, can you explain why the type of grease used 13 would be consistent with the issue happening at a 14 higher mileage? 15 A. The type of grease is somewhat irrelevant 16 to the environment. If the -- the creation, the 17 organic silicon -- or silicon dioxides takes two things 18 to occur. You have to have organic silicons available, 19 and the source can be any organic silicon. 20 So in this case, Michael is referring to -- 21 Michael Gritt is referring to the lubricant on the 22 block or the nine, whatever he is referring to. It 23 could have been environmental as well, it could have 24 been customer applied through the use of, say, Armor 25 All, or it could have been other sources as well. So</p>	<p style="text-align: right;">Page 108</p> <p>1 Q. Okay. And then you respond: "With respect 2 to SIO, yes every switch that has had the SEM analysis 3 shows evidence of SIO deposits on the switch contacts." 4 And then if you look up at page 2 of the 5 PDF, 22068, Michael Gritt responds: "I am talking 6 about the grease directly in the area of the park 7 button switch. Why do we use silicone based grease in 8 this area??? Why is this not a focus of the Red X 9 project based on previous supplier analysis? I would 10 like the grease application (in the switch area) to be 11 the main topic of this week's CPIT review." 12 So to begin, what was the results of the 13 referenced previous supplier analysis? 14 A. Reference previous supplier analysis? 15 Q. He said, why is this not a focus of the 16 RedX project based on previous supplier analysis. 17 I was just asking what was that previous 18 supplier analysis that he references? 19 A. I do not know. 20 Q. Is he correct that. At this point in time, 21 the RedX project wasn't focused on grease in this area? 22 A. I think it was -- in fact, I'm certain it 23 wasn't focused on grease in this area. I may have 24 corrected Michael on this. 25 Q. Okay.</p>
<p style="text-align: right;">Page 107</p> <p>1 we have -- if it's there and you have the right energy, 2 you will create silicon dioxides. 3 Q. Okay. And so at this point in time had 4 there been this comparison performed regarding silicon 5 dioxide at the contact area? We talked about the 6 running of the WOW -- I think it's worst of worst, the 7 best to best comparison. 8 A. State your question again, please. 9 Q. So he said -- it seems like he said at some 10 point prior we discussed running WOW to BOB comparison 11 of the observed silicon dioxide buildup on the switch 12 contacts. 13 And so my question is: Had that comparison 14 been performed by this point in time? 15 A. July 23rd, probably not. This would have 16 been a week afterwards. 17 Q. Okay. 18 A. I will speculate that he was asking that we 19 would engage with our GM research lab to go and do this 20 analysis. And that analysis could take a couple of 21 three weeks to get done. 22 Q. Okay. 23 A. So we would have supplied GM research with 24 WOW and BOB parts, and two or three weeks later they 25 would have conducted the work and gotten back.</p>	<p style="text-align: right;">Page 109</p> <p>1 A. He was referring to the grease in the area 2 of the park switch arm, and I think in this e-mail I 3 may have corrected him. That grease was not 4 silicon-based grease. 5 Q. Okay. Understood. 6 So by this point in time, what areas for 7 the, you know, possible production of silicon dioxide 8 were you focused on? 9 A. We were looking -- we had known -- by this 10 point, we had found out about the lubricants that were 11 being applied -- at least I think we had. It was about 12 this time frame. I don't know if it was exactly in 13 this time frame. But the dampers as well as we were 14 looking at theories of the BTSI blocker grease 15 migrating to the switch. That was one of the main 16 theories that we were looking at. 17 Q. Approximately, when did GM ultimately 18 determine or rule out all the other causes and 19 determine it was the buildup of silicon dioxide? 20 A. It was very near this time. Up and to this 21 point of July, late July, we had not been able to find 22 a live case. Sometime in mid July, August we were able 23 to put a scope on a live case at our service learning 24 center and we were -- unequivocally found that the 25 problem was within the shifter and only into the park</p>

<p style="text-align: right;">Page 110</p> <p>1 switch. Up to that point, we were still looking at 2 other evidence that pointed to other areas outside of 3 the switch even though the evidence in front of us said 4 it was most likely the switch. We had not until we had 5 the live case and gathered data from it, proven beyond 6 a doubt that the problem was within the switch. And 7 that occurred in mid August of 2018.</p> <p>8 Q. I will send another document over. This is 9 produced by GM. It's labeled 24051 to 24053.</p> <p>10 MR. MARKOVITS: We will mark that 11 Exhibit 13. 12 (Exhibit No. 13 marked.)</p> <p>13 Q. (BY MR. MARKOVITS) And let me know when 14 you're ready to discuss.</p> <p>15 A. I have it open.</p> <p>16 Q. So if you go to page 2, this is an e-mail 17 between a senior buyer, Anne Franz, and Liza Seufert 18 DRE-A/T Shift Controls.</p> <p>19 Ms. Franz mentions that her personal Acadia 20 experienced the "Shift to Park" message.</p> <p>21 "It's getting really annoying. I don't see 22 any recalls or warranty on my vehicle." She asked 23 should she take it to the dealer.</p> <p>24 And then above, Ms. Seufert says: 25 "Unfortunately, I would recommend taking it to a dealer</p>	<p style="text-align: right;">Page 112</p> <p>1 most likely, as I recall, occurred in October or maybe 2 mid September of that time frame. So there's a high 3 probability that this part that this customer was 4 getting was the same as what was on her car originally.</p> <p>5 Q. And sorry, when do you think that new 6 shifters for the '17 Acadia were created?</p> <p>7 A. The new part number?</p> <p>8 Q. You mentioned there's -- you mentioned that 9 there is some change to the part just now. And I think 10 you said you thought it might have occurred in October 11 of '18; is that correct?</p> <p>12 A. That's correct.</p> <p>13 Q. Okay.</p> <p>14 A. It would have been when the supplier 15 discovered that one of their tiered suppliers was using 16 silicon mold release on a damper, they immediately 17 stopped that, cleared stock through the process and put 18 in nonsilicon-based or nonsilicon-based lubricant on 19 these parts. The exact date of when that made it to 20 production, I'm unsure of, but it was within this 21 three-month time frame between September and November 22 of '18.</p> <p>23 Q. Okay. I'm going to send over another 24 document.</p> <p>25 So I sent over a Document 30480 to 30481.</p>
<p style="text-align: right;">Page 111</p> <p>1 to get it fixed. They have been dealing with a lot of 2 these recently. They should be checking for grounds on 3 the shifter circuit," before replacing the shifter.</p> <p>4 Then if you turn up to page 1, 24051, 5 Ms. Franz writes back on September 6th that she took it 6 to the dealer that they said that there was no remedy 7 available. They gave her paperwork stating that GM 8 Engineering is still investigating the root cause, no 9 remedy available. And then she says, should they have 10 replaced the shifter per your e-mail.</p> <p>11 And then, finally, above that, Ms. Seufert 12 writes: "It is true we don't have a fix. A 13 replacement is merely a band-aid, as there is no 14 difference in the part that you would be receiving, 15 from what you already have. The issue will come back 16 again."</p> <p>17 So my question is: Is it correct in 18 September of 2018 that any vehicles given a replacement 19 shifter were given the same part that existed in the 20 original vehicle?</p> <p>21 A. Yes. At that time, if the part number was 22 the same part number in the service, then it was of the 23 same design origin. I do not think at this time that 24 the removal of the -- the dampers had -- the 25 silicon-based dampers had made it to production. That</p>	<p style="text-align: right;">Page 113</p> <p>1 MR. MARKOVITS: We will mark that 2 Exhibit 14. 3 (Exhibit No. 14 marked.)</p> <p>4 Q. (BY MR. MARKOVITS) And can you turn to the 5 second page Bates-labeled 30481?</p> <p>6 A. 30481?</p> <p>7 Q. Yes, the second page of this PDF. Okay. 8 And I want to talk about this in more detail, but just 9 briefly here he says that on March 6, 2019, engineering 10 has developed a Service solution for the Shift to Park 11 concern that involves a small jumper harness that's 12 placed in the harness at the connection of the shifter.</p> <p>13 And then if you go up to page 1, 14 Bates-labeled 30480, he notes that: "The 'new' silicon 15 free shifter is in all Plants except for C1's, which 16 will be in place by early next week."</p> <p>17 And this is an e-mail dated March 7th, 18 2019. So am I correct here that by March 7th, 2019, GM 19 did not yet implement the new part for the 2017 Acadia 20 or the '18 Acadia for that matter?</p> <p>21 A. Yeah, based on the, you know, communication 22 here from Tom, that appears to be true.</p> <p>23 Q. So the earlier statement that you thought 24 it might have been between October or that period of 25 time is not true; right? It didn't happen until at</p>

<p style="text-align: right;">Page 134</p> <p>1 answered us already: Did the use of organic silicon 2 materials during the manufacturing process contribute 3 towards the production of silicon dioxide on the switch 4 contacts? 5 MR. ORZANO: The same objection. 6 THE WITNESS: I'm still not understanding 7 the question. Can you state it in a different way? 8 Q. (BY MR. MARKOVITS) So they are making a 9 distinction here between using silicon-based parts 10 within the micro-switch itself and separately, contacts 11 of silicon or silicon materials during the 12 manufacturing process; right? They are saying those 13 are two different things, looking at Conclusion No. 6. 14 A. Yeah. So -- okay, I see that as the -- the 15 recommendation is specific to the Omron switch and not 16 necessarily inclusive of the shifter. I think what 17 their recommendation here is that Omron, the 18 manufacturer of the micro-switch, eliminate the 19 silicon-based parts and avoid contact of silicon and 20 any organic silicon during the manufacturing processes 21 of the switch. 22 Q. Okay. 23 A. That's not stated. 24 Q. So they are saying, not only don't use 25 silicon-based parts within the micro parts, but don't</p>	<p style="text-align: right;">Page 136</p> <p>1 Q. When GM began using the Omron micro 2 switches in the '17/'18 Acadia, was it aware that they 3 used silicon lubricant within the micro switch? 4 A. We were not. 5 Q. Okay. Were there any instructions from GM 6 to Omron or any of the other suppliers of the shift 7 assembly to specifically not use silicon lubricant? 8 A. At the time of sourcing of this component 9 that requirement had not been documented in the 10 specification for the shifter. 11 Q. Okay. So no, there were no instructions at 12 that time? 13 A. No. 14 Q. Okay. Thank you. 15 I am going to send over another document. 16 So this is another document produced by GM 17 Bates-labeled 34976 through 34988. 18 (Exhibit No. 20 marked.) 19 THE WITNESS: Okay. 20 Q. (BY MR. MARKOVITS) I'm going to focus on 21 the first page. Can you let me know what this is? 22 A. The document in its entirety? Or -- 23 Q. Yeah, I guess the document in its entirety 24 to begin with. 25 A. So this is a standard or a template form in</p>
<p style="text-align: right;">Page 135</p> <p>1 use silicon when you're manufacturing the micro-switch? 2 A. Correct. 3 Q. Okay. Got it. Thank you. So there is a 4 discussion here around page 5, beginning on page 5 at 5 GM31689 where they -- correct me if I'm wrong -- I 6 believe they're concluding that both best of best and 7 worst of worst switches both form silicon dioxide over 8 time -- 9 A. Correct. 10 Q. -- is that correct? 11 A. Yes. 12 Q. And so that basically means that all of 13 these parts are likely to result in the "Shift to Park" 14 message eventually? 15 MR. ORZANO: Assumes facts, document speaks 16 for itself, speculation, calls for speculation. 17 Q. (BY MR. MARKOVITS) You can answer, Mr. Van 18 Camp. 19 A. Yeah. So what we have seen is that not all 20 vehicles have failed within our warranty period. We 21 have lots of warranty or lots of vehicles that have 22 never experienced this. So yes, all of these 23 apparently, if they are silicon, they'll have it, but 24 the conditions may not align to create the failure in 25 any particular car.</p>	<p style="text-align: right;">Page 137</p> <p>1 which we do a review of issues, and it is a read across 2 to other organizations and within our organization as 3 well, chassis. So other areas won't encompass or 4 encounter the same issue or if they do, they'll know 5 how to address it in a timely manner. 6 Q. Okay. And this is specifically regarding 7 the shift department investigation; right? 8 A. Yes. 9 Q. All right. I would like to go through each 10 of these and kind of make sure I understand everything. 11 So if you look to the top it says: 12 "Durability testing did/has not failed new parts." And 13 then at the bottom bullet and it says: "DRBTR was not 14 performed on switch contacts - SEM analysis would have 15 found bud of problem (SIO contacts.)" 16 What's "DRBTR"? 17 A. DRBTR is an acronym for Design Review Based 18 on Test Results. It is analysis of physical parts 19 after testing so you do -- you run a part through a 20 test and you gather your validation engineers, your 21 release engineers and any others that may be interested 22 in looking at the parts with the supplier. Whether the 23 parts of passed testing or failed testing, you still 24 review the parts and you see if there is anything there 25 that looks unusual, that would call your attention to</p>

<p style="text-align: right;">Page 150</p> <p>1 that -- you know, the vehicles are not rolling. It is 2 just a "Shift to Park" message related to -- not 3 related to how the transmission is parking the vehicle. 4 Q. So to be clear, NHTSA reached out to GM in 5 early 2018, was it regarding the "Shift to Park" 6 complaints generally or more specifically these 7 rollaway claims? 8 A. As I recall, it was more general around the 9 "Shift to Park". 10 Q. Okay. And to the right of the VOQ, 11 "Tread." 12 What does that mean? 13 A. I'm not entirely sure. I've seen the tread 14 reports. That's another NHTSA reporting system as 15 well. 16 Q. Okay. Can we move on to the second page? 17 37716. So I understand this document is not just 18 regarding 2017 and '18 Acadia, it's also the later 19 years Acadia, the Traverse, the Volt, the Camaro the 20 Malibu. It says the population for that entire group 21 is 2,982,702. 22 Do you know what the population is for just 23 '17/'18 Acadia, to the best of your knowledge? 24 A. I do not know the exact number. 25 Q. Okay.</p>	<p style="text-align: right;">Page 152</p> <p>1 wrong there, but I think it was pivot. 2 Is that identified in this change timeline? 3 A. It is -- 4 Q. Where is it? 5 A. The work order 135228 LBY2L. 6 Q. Okay. 7 A. So that was the initial work order. And 8 then, the way our system works, that work order is for 9 the common component, and then there's work orders for 10 the program specific after that. 11 Q. So the specific one would be C1UG to the 12 right of that for November 9, 2018? 13 A. That is correct. 14 Q. And so when you say "work order," does that 15 mean the request was made at that time to do it? 16 A. Yes. 17 Q. Okay. Do you know when it was actually 18 completed? 19 A. I don't know when that change or those 20 changes specifically made it into the assembly plants 21 and, thusly, customer's cars. But my recollection 22 was -- it was sometime in mid '19. 23 Q. And so is it -- so is this what you were 24 referring to when you mentioned them removing silicon 25 from the pivot specifically?</p>
<p style="text-align: right;">Page 151</p> <p>1 A. But I know it's speculation, if I would to 2 guess, it is roughly 200,000 for those two years. 3 Q. Okay. And can you go to page 6, which is 4 37720? 5 A. Okay. 6 Q. So this says, "Key Ignition Condition." I 7 understand the '18 and '17 Acadia don't have key 8 ignitions but it says: "Corrective action: 'wiggle' 9 shifter knob back and forth. Remove key." 10 Is there a similar corrective action for 11 push-button ignitions? 12 A. If you remove the ignore key as noted 13 previously, if you manipulate the shift knob button in 14 and out, push it and actuate it, that will help to 15 break down the silicon dioxide layer and have the 16 vehicle function normally again. 17 Q. Do you know if that corrective action was 18 communicated to vehicle owners at any time? 19 A. I do not know. I do not think it was. 20 Q. Okay. Can you go to page 9, which is 21 37723? 22 A. Okay. 37723. 23 Q. So it says change timeline. And you had 24 mentioned previously that sometime in the fall of 2018 25 they stopped using silicon on the pivot. I could be</p>	<p style="text-align: right;">Page 153</p> <p>1 A. Yes. 2 Q. Okay. Is it safe to assume that a vehicle 3 that got a replacement shifter in October of 2018 for 4 the '17 or '18 Acadia got the original part, not a 5 modified or revised version? 6 MR. ORZANO: Foundation, calls for 7 speculation. 8 Q. (BY MR. MARKOVITS) Okay, can we go on to 9 page 11, which is 37725. 10 So this says, "Warranty Data Acadia." And 11 if you look at the middle graph, they're looking on 12 the -- on one axis as the months of exposure and on the 13 other axis, IPTV. 14 Does IPTV mean incidents per 1,000 15 vehicles? 16 A. Yes. 17 Q. Okay. So it looks like the 2017 Acadia at 18 the 36-month warranty mark had an IPTV somewhere 19 between 150 and 200; is that right? 20 A. 2017? 21 Q. Yeah, I think '17 looks like it's the more 22 bold line; right? 23 A. That makes sense, 2017 at 36 months appears 24 to be about 175. 25 Q. And so that means 17.5 percent of vehicles</p>

<p style="text-align: right;">Page 154</p> <p>1 out there were experiencing the issue at the 36-month 2 mark? 3 A. Yes. 4 Q. And it looks like the graph continues on 5 the same case for the following months thereafter; 6 correct? 7 A. Yes. 8 Q. And I believe there is no additional 9 information, because by this point when this was 10 prepared, the cars hadn't been driven for any longer 11 than approximately 42 months; is that right? 12 A. That is part of it. And additionally, once 13 vehicles leave the warranty period, we don't have those 14 warranty events unless they bring them into a dealer. 15 Q. Is the -- is the shifter covered by the 16 36-month warranty or a different warranty? 17 MR. ORZANO: Vague and ambiguous, calls for 18 a legal conclusion. 19 Q. (BY MR. MARKOVITS) You can continue 20 Mr. Van Camp. What were you saying? 21 A. The shifter is in most vehicles covered by 22 36, some vehicles it's covered by a longer warranty. 23 Q. Do you know with respect to the '17/'18 24 Acadia which warranty it's covered by? 25 MR. ORZANO: The same objection.</p>	<p style="text-align: right;">Page 156</p> <p>1 A. Okay. 2 Q. It is hard to make out because of the 3 quality of the document, but there's one vehicle at the 4 top that looks like it experienced issues much sooner 5 than all of the others. It looks like it's a Camaro to 6 me; is that right? 7 A. Yes, that's what it looks like. 8 Q. And so this is showing that sometime in -- 9 is that 2013? It looks like there was a peak in IP-TV 10 for the Camaro? 11 A. Yes. 12 Q. Was any investigation done regarding the 13 Camaro in 2013 or '14? 14 A. Yes. 15 Q. Do those vehicles share the same shifter 16 design as the shifters in the '17 or '18 Acadia? 17 A. This -- that shifter is not the same 18 shifter. It's a different design. 19 Q. What was the issue in the Camaros? 20 A. We were never able to determine what the 21 root cause was. 22 Q. Was it also a "Shift to Park" message 23 complaint? 24 A. It was key stuck, yes. 25 Q. Okay, but the investigation had been</p>
<p style="text-align: right;">Page 155</p> <p>1 THE WITNESS: I don't know for sure. But I 2 think that's our 36-month. 3 Q. (BY MR. MARKOVITS) Okay. So this is 4 showing at similar points in time somewhere between 15 5 and 20 percent of the vehicles are making warranty 6 claims after the warranty period has expired; correct? 7 A. Can you state that question again? 8 Q. So you can see that the line for the '17 9 Acadia continues after the 36-month marker. And it's 10 between the 150 and 200 IPTV lines; correct? 11 A. Right. 12 Q. That means that somewhere between 15 and 13 20 percent of 2017 Acadia made warranty claims after 14 the 36-month warranty period had already expired? 15 A. That's correct. Something you need to 16 understand about this warranty is this is cumulative, 17 this is not a particular time frame. So this number is 18 the total accumulation, not a particular month. 19 Q. Okay. I understand. So by this -- by that 20 point, by after the 36-month mark, over the course of 21 the lifetime of all these vehicles, there have been 22 somewhere between 15 and 20 percent and that describes 23 the entire universe of '17 Acadia? 24 A. Correct. 25 Q. So can you turn to page 16, that's 37730.</p>	<p style="text-align: right;">Page 157</p> <p>1 initiated; correct? 2 A. Yes. 3 Q. Were you -- was GM able to rely on any of 4 the findings from their 2014 or '13 investigation when 5 investigating the '17 and '18 Acadia shifters? 6 A. Other than personal experience by me, I 7 know there was no data that was leveraged in that 8 investigation for the UC1G -- 9 Q. Okay. 10 A. -- that I ever recall. 11 Q. And now go to page 5, that's 37739. 12 A. What was the last two digits. 13 Q. Sorry, 39. 14 A. 39, summary? 15 Q. Yes. So it says: "Issue begins as an 16 intermittent failure and then progresses to complete 17 failure if customer delays service." 18 How can you -- generally speaking, how 19 quickly does it go from an intermittent to a complete 20 failure? For what period of time is it generally 21 experiencing intermittent failure and then for how long 22 until it turns into a complete failure, meaning it 23 happens every time you use the vehicle? 24 MR. ORZANO: Vague and ambiguous, calls for 25 speculation.</p>

<p style="text-align: right;">Page 158</p> <p>1 THE WITNESS: So based on what I've seen in</p> <p>2 the field, this is a very broad response. Some</p> <p>3 vehicles will progress quickly. Some of them can be</p> <p>4 months, between intermittent failure to complete</p> <p>5 failure. We've had discussions with employees and</p> <p>6 their personal vehicles. And it would be intermittent</p> <p>7 for two or three or even four months before it became</p> <p>8 more prevalent. So it varies, certainly, by -- vehicle</p> <p>9 to vehicle --</p> <p>10 Q. Okay.</p> <p>11 A. -- how fast it progresses.</p> <p>12 Q. So how fast it progresses varies, would you</p> <p>13 generally observe a trend where it went from an</p> <p>14 intermittent to a more frequent occurrence; correct?</p> <p>15 MR. ORZANO: Vague and ambiguous, calls to</p> <p>16 speculation.</p> <p>17 THE WITNESS: Yeah, based on, you know,</p> <p>18 what we've seen, that would typically be the</p> <p>19 progression. Very rarely does it progress backwards,</p> <p>20 although, we have seen cases where they've reported</p> <p>21 that they had it and then it went away completely for</p> <p>22 months and then came back. So we've seen it go both</p> <p>23 ways as well.</p> <p>24 Q. (BY MR. MARKOVITS) Okay. Can you turn to</p> <p>25 page 50? It ends with 64.</p>	<p style="text-align: right;">Page 160</p> <p>1 A. It varies.</p> <p>2 Q. And is the -- so there is the part</p> <p>3 component and then the labor component.</p> <p>4 Does the part cost the same throughout the</p> <p>5 country?</p> <p>6 A. I don't have that specific information, but</p> <p>7 what I understand the cost does vary.</p> <p>8 Q. Okay. And you said the cost of the repair</p> <p>9 could be determined from the warranty data; correct?</p> <p>10 A. Yes.</p> <p>11 Q. Okay. Thank you. And can you turn to 64</p> <p>12 which ends in 78?</p> <p>13 A. Okay.</p> <p>14 Q. So this is called the "Safety</p> <p>15 Categorization - Severity Framework." Here it is</p> <p>16 identified as a No. 2, a "Potential failure mode may</p> <p>17 cause major customer dissatisfaction or annoyance."</p> <p>18 I noticed, like, 4, for instance, says:</p> <p>19 "Potential failure mode may cause loss or reduction of</p> <p>20 primary function or control system."</p> <p>21 Now, we discussed earlier that if the</p> <p>22 "Shift to Park", when someone is experiencing the</p> <p>23 "Shift to Park" message issue, and the vehicle goes</p> <p>24 into accessory mode, the battery will eventually die</p> <p>25 and the vehicle dies; correct?</p>
<p style="text-align: right;">Page 159</p> <p>1 A. 64? Thank you. Okay. "Chronology."</p> <p>2 Q. Yeah. So September 11th, '18, it says,</p> <p>3 "PIR decision to open investigation."</p> <p>4 What's that?</p> <p>5 A. PIR is a forum that looks at the evidence</p> <p>6 that's presented to them and determines if further</p> <p>7 investigation is required. So it's a filtering board</p> <p>8 where the SUFS will come in after the TAC does their --</p> <p>9 what I would call ranking, and then it goes to PIR.</p> <p>10 PIR determines if they are going to open a formal</p> <p>11 investigation or close with no action.</p> <p>12 Q. Okay. And can we go down to page 59, which</p> <p>13 ends in 73?</p> <p>14 A. Okay.</p> <p>15 Q. So this says, "Estimated Cost."</p> <p>16 These are costs to GM; correct?</p> <p>17 A. Yes.</p> <p>18 Q. Do you know what the average cost of</p> <p>19 replacing the shifter assembly is to the consumer?</p> <p>20 A. I do not know --</p> <p>21 MR. ORZANO: Vague and ambiguous.</p> <p>22 THE WITNESS: I do not know the average</p> <p>23 cost that would have to be garnered out of the warranty</p> <p>24 data.</p> <p>25 Q. (BY MR. MARKOVITS) Okay.</p>	<p style="text-align: right;">Page 161</p> <p>1 A. Correct.</p> <p>2 Q. In that case, wouldn't the primary function</p> <p>3 of the vehicle be reduced entirely, being, it can't be</p> <p>4 driven?</p> <p>5 A. It's true, but it doesn't present a safety</p> <p>6 risk when it's parked.</p> <p>7 Q. What do you mean by: "It doesn't present a</p> <p>8 safety concern"?</p> <p>9 A. So General Motors is focused on the safety</p> <p>10 of the customer with respect to how the vehicle</p> <p>11 behaves. So if a vehicle rolls, that's clearly a</p> <p>12 safety.</p> <p>13 So in this case, when this failure happens,</p> <p>14 the vehicle is in park and can't roll. If you notice</p> <p>15 No. 4 rating gets the potential rollaway. In this</p> <p>16 case, a vehicle with a dead battery in park is not</p> <p>17 considered a safety issue with respect to the human</p> <p>18 life.</p> <p>19 Q. Okay. Would you agree that where someone</p> <p>20 gets stranded because their battery has died, that</p> <p>21 could impact their safety?</p> <p>22 A. That's very situation-specific. Again, I</p> <p>23 would be speculating at best of how a dead battery</p> <p>24 might affect someone's safety.</p> <p>25 Q. Okay. But depending on the safety it</p>

<p style="text-align: right;">Page 162</p> <p>1 could?</p> <p>2 A. Potentially.</p> <p>3 Q. And finally, the last page ends in 80, the</p> <p>4 "Safety Categorization - Occurrence Framework."</p> <p>5 A. Okay.</p> <p>6 Q. So this has a couple of different readings</p> <p>7 and it's based on the incidents per thousand of</p> <p>8 vehicles. Here the highest rating 5, almost certain is</p> <p>9 what this issue has been graded; correct?</p> <p>10 A. Yes.</p> <p>11 Q. And so anything above 111 IPTV or</p> <p>12 approximately 11 percent would fall into this category;</p> <p>13 right?</p> <p>14 A. Yes.</p> <p>15 Q. Okay. I sent another document. This is</p> <p>16 39268 through 39274.</p> <p>17 MR. MARKOVITS: Can we mark this</p> <p>18 Exhibit 21.</p> <p>19 (Exhibit No. 21 marked.)</p> <p>20 Q. (BY MR. MARKOVITS) Let me know when you're</p> <p>21 ready to discuss.</p> <p>22 A. I can see this.</p> <p>23 Q. Can you turn to page 2 which ends in 69?</p> <p>24 A. Okay, I'm looking.</p> <p>25 Q. So the second bullet point in this says:</p>	<p style="text-align: right;">Page 164</p> <p>1 preinvestigation."</p> <p>2 So my question is: Why do you think that</p> <p>3 there's higher complaints post November 2019 than</p> <p>4 before that?</p> <p>5 A. I could only speculate. What we've seen is</p> <p>6 once a problem becomes publicized, we end up with more</p> <p>7 people complaining about the particular defect. And it</p> <p>8 certainly could drive a higher VQ rate.</p> <p>9 Q. Okay. And then, the two bulletins below</p> <p>10 that says: "Nearly half (44%) of submitters are beyond</p> <p>11 36k mileage for regular warranty repair coverage."</p> <p>12 Has GM implemented any sort of extended</p> <p>13 warranty regarding the "Shift to Park" issue?</p> <p>14 A. No, not that I'm aware of.</p> <p>15 Q. So this is suggesting that approximately</p> <p>16 44 percent of people are making complaints after their</p> <p>17 warranty coverage ended; right?</p> <p>18 MR. ORZANO: Calls for speculation,</p> <p>19 foundation.</p> <p>20 THE WITNESS: I would say that 44 percent</p> <p>21 of submitters. I don't know how that relates to the</p> <p>22 overall population.</p> <p>23 Q. (BY MR. MARKOVITS) Okay. And we discussed</p> <p>24 earlier that the issue doesn't manifest immediately;</p> <p>25 right? It typically takes more than a year to manifest</p>
<p style="text-align: right;">Page 163</p> <p>1 "GVS-CORE 227446 was CWNFA over a year ago now</p> <p>2 (10/2019). In the period since 11/2019 there have been</p> <p>3 nearly 500 VOQs submitted related to the issue. This</p> <p>4 is substantially higher than the VOQ traffic rate</p> <p>5 preinvestigation."</p> <p>6 What does that mean?</p> <p>7 A. So what specifically are you asking about?</p> <p>8 Q. I guess, let's break it down.</p> <p>9 A. Yeah.</p> <p>10 Q. What is GVS-CORE 227446?</p> <p>11 A. Okay. GVS-CORE that is the investigation</p> <p>12 document ID. So the file like we were just looking at</p> <p>13 or that was related or reviewed. That is that</p> <p>14 document.</p> <p>15 Q. Okay. So you're saying that was more than</p> <p>16 a year prior to November 2020. And then, they go on to</p> <p>17 say: "Since 11/2019 there have been nearly 500 VOQs</p> <p>18 submitted related to the issue."</p> <p>19 Does that mean there have been 500 NHTSA</p> <p>20 complaints?</p> <p>21 A. I would have to make sure I fully</p> <p>22 understand VOQs. But if VOQ goes through the NHTSA,</p> <p>23 then that would be a true statement.</p> <p>24 Q. Okay. And then it notes: "This is</p> <p>25 substantially higher than the VOQ traffic rate</p>	<p style="text-align: right;">Page 165</p> <p>1 initially after the vehicle has been in use?</p> <p>2 A. Correct.</p> <p>3 Q. Okay. So while the issue with the shifter</p> <p>4 existed at the time that the vehicles were produced or</p> <p>5 sold, the actual defect doesn't manifest until much</p> <p>6 later; correct?</p> <p>7 A. In that time frame --</p> <p>8 MR. ORZANO: Vague and ambiguous.</p> <p>9 THE WITNESS: It will manifest itself in a</p> <p>10 fairly broad range.</p> <p>11 Q. (BY MR. MARKOVITS) So would you describe</p> <p>12 that as a latent defect?</p> <p>13 MR. ORZANO: Vague and ambiguous, calls for</p> <p>14 a legal conclusion.</p> <p>15 THE WITNESS: Tell me what you mean by</p> <p>16 "latent."</p> <p>17 Q. (BY MR. MARKOVITS) A latent defect is</p> <p>18 something that is not immediately apparent when the car</p> <p>19 is first manufactured, it doesn't manifest until a</p> <p>20 later period of time.</p> <p>21 A. Yes, this certainly would appear as a</p> <p>22 latent defect.</p> <p>23 Q. Okay. All right. I just have one more set</p> <p>24 of documents that were just produced to me the other</p> <p>25 night, and then I should be done. So it is four Excel</p>